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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/265,073

Applicant(s)

OVARD ET AL.

Examiner

Nam V. Nguyen

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25, 27-41 and 51-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23, 25, 27-41 and 51-67 is/are rejected.
- 7) ☒ Claim(s) 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/C)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date 4/7/08

DETAILED ACTION

This communication is in response to applicant's Amendment which is filed April 7, 2008.

An amendment to the claims 1-3, 6-7, 9-13, 16-17, 19-22, 24, 27, 34-35, 40, 42, 51, 53, 58, has been entered and made of record in the application of Ovard et al. for a "wireless communication systems, interrogators and method of communicating within a wireless communication system.

Claim 42 is cancelled.

Claims 11-25, 27-41 and 51-67 are now pending in the application.

Response to Arguments

Applicant's arguments with respect to claims 11-25, 27-41 and 51-67, filed April 7, 2008 have been fully considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 11, 13, 21-22, 25 and 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,649,296) in view of Guthrie et al. (US# 6,058,374).

Referring to claim 11, MacLellan et al. disclose a wireless communication system (i.e. see Figure 1) comprising:

- an interrogator (101) (i.e. application processor) including:

- a housing is inherently and including circuitry configured to generate a forward link communication signal;

- a communication circuitry (102) (i.e. LAN) configured to communicate the forward link communication signal; and

- a plurality of communication stations (103-104) (i.e. interrogator) remotely located with respect to the housing and configured to receive the forward link communication signal from the communication circuitry (102) (i.e. LAN) and to radiate a forward link wireless signal corresponding to the forward link communication signal; a remote communication device (103) (i.e. interrogator) configured to receive the forward link wireless signal (col. 3 lines 25-43).

However, MacLellan is silent on teaching the circuitry configured to generate the forward link communication signal comprising a modulated signal and a plurality of communication circuitry outside of the housing and coupled with the circuitry of the housing and each communication circuitry configured to communicate the forward link communication signal

to an individual one of a plurality of communication stations remotely located with respect to the housing.

In the same field of endeavor of RFID communication system, Guthrie et al. teach that a plurality of DSSS circuitry (42-46) (i.e. communication circuitry) of the master transceiver (3) outside of the security console (2) (i.e. housing) and coupled with the circuitry of the security console (2) (i.e. the housing) and each communication circuitry (42 to 46) configured to communicate the forward link communication signal to an individual one of a plurality of transceivers (4a-4n) (i.e. communication stations) remotely located with respect to the security console (2) (i.e. the housing) (column 8 lines 54 to column 9 line 7; see Figure 3) in order to handle appropriate protocol functions depending upon the range being transmitted over the antenna.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize using plurality of DSSS circuitry to transmit signal to at least one of the transceivers depending upon the range being transmitted over by the antenna taught by Guthrie et al. in modulated backscatter system of MacLellan et al. because using a plurality of DSSS circuitry would improve handling of plurality protocol functions.

Referring to the Claim 21, MacLellan et al. in view of Guthrie et al. disclose the wireless communication, to the extent as claimed with respect to claim 11 above, MacLellan et al. disclose the system further including: circuitry (i.e. signals from the LAN 102 to interrogator 103 to interrogator 104) configured to generate a plurality of forward link signals (i.e. see Figure 1).

Referring to the Claims 1, 27, and 58, MacLellan et al. in view of Guthrie et al. disclose the wireless communication, to the extent as claimed with respect to claim 11 above, MacLellan et al. disclose the system further including: circuitry (i.e. signals from the LAN 102 to interrogator 103 to interrogator 104) configured to generate a plurality of forward link signals (i.e. see Figure 1) and Guthrie et al. disclose the communication circuitry comprising processor (40) (i.e. a microcontroller) and a radio frequency (48) section including RF circuitry and switching circuitry (column 8 lines 24 to column 9 line 7; see Figure 3) in order to handle appropriate protocol functions depending upon the range being transmitted over the antenna wirelessly.

Regarding to claims 3, 13 and 22, MacLellan et al. in view of Guthrie et al. disclose the communication station, MacLellan et al. disclose the communication stations include the adjustment of an electrical characteristic of the forward link communication signal (Fig. 8, col. 7, lines 13-47, power adjustment (col. 7, lines 43-45, the downlink carrier is always fully or partially present) associated with downlink transmission or interrogation transmission-100% AM or 50% AM or 100% power level and 50% power level).

Regarding claim 51, MacLellan et al. in view of Guthrie et al. disclose the communication station according to Claim 1, MacLellan et al. disclose wherein the communication station is configured to convert the forward link communication signal comprising the modulated signal from a first communication medium type (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits); modulated digital signal out of

computer 101 associated with application processor) to a second communication medium type (Figs. 1-3, second modulated signal out of 204) comprising a wireless medium and different than the first communication medium type

Regarding claim 52, MacLellan et al. in view of Guthrie et al. disclose the communication station according to Claim 51, MacLellan et al. disclose wherein the first communication medium type comprises a wired medium (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits).

Regarding claim 53, MacLellan et al. in view of Guthrie et al. disclose the communication station according to Claim 1, MacLellan et al. disclose wherein the communication circuitry comprises a wired medium configured to communicate the forward link communication signal comprising the modulated signal intermediate the housing and the communication station (Figs. 1-3, first modulated signal within 101-102 and communication stations 103 (wired LAN circuits); digital signal out of computer).

Regarding claim 25, MacLellan in view of Guthrie et al. teach the wireless communication system according to claim 21, MacLellan et al. disclose in Fig. 2, power associated with radio signal sources for plural interrogator stations 103... 103 + N) are individually positioned to radiate the forward link wireless signal within one of a plurality of communication ranges.

Claims 2, 6-8, 12, 16-18, 27-29, 33-37, 41, 55-57, and 64-65 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US# 5,649,296) in view of Guthrie et al. (US# 6,058,374) as applied to Claims 1 and 11, and in further view of Wood, Jr. (US# 5,842,118).

Referring to claims 2 and 12, MacLellan et al. in view of Guthrie et al. disclose the system of claims 1 and 11. However, MacLellan et al. in view of Guthrie et al. did not explicitly disclose a driver amplifier coupled with the circuitry of the housing and configured to increase the power of the forward link communication signal and to apply the forward link communication signal to an input of the communication circuitry.

In an analogous art, Wood, Jr. discloses a driver amplifier to increase the power of the forward link communication signal (Fig. 7, preamplifier (79); col. 6, lines 30-42, power adjustable) in order to interrogate the devices 12 in a greater range. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to have a driver amplifier into MacLellan's Application Processor would increase in the interrogation range.

Regarding claims 6 and 16, as shown in Fig. 7, Wood discloses that RF circuitry 54 (i.e., the communication station) includes a power amplifier (PA) 79, which receives the forward link communication signal from enhanced parallel port (EPP) circuitry 50 (i.e., communication circuitry) and amplifies the forward link communication signal (see Fig. 5, EPP circuitry 50; Col. 12, lines 28-44; and Col. 13, lines 16-33).

Regarding claims 7 and 17, Wood's communication station, as shown in Fig. 5, further includes antennas XI, X2, R1, and R2 to receive and radiate (see Col. 5, lines 39-52).

Regarding claims 8 and 18, Wood's radio frequency data communications device 12 is understood to be a radio frequency identification (RFID) device (see Col. 4, lines 19-26, RF identification badge).

Regarding claim 64, Wood teaches wherein the forward link communication signal generated by the circuitry of the housing comprises data including command (col. 5, lines 34-52, common housing of host computer 48 and interrogator 26; interrogation signal or command)

Claims 27-29 and 33-34 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 1-3, 6, and 8. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 1-3, 6, and 8 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claims 27-29 and 33-34 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 27-29 and 33-34 would have been obvious to the

artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 1-3, 6, and 8.

Regarding claim 65, Wood teaches the method according to claim 27 wherein the generating the forward link communication signal comprising data including command (col. 5, lines 34-52, common housing of host computer 48 and interrogator 26; interrogation signal or command)

Claims 35-37 and 41 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 11-13 and 16. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 11-13 and 16 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claims 35-37 and 41 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claims 35-37 and 41 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 11-13 and 16.

Regarding claim 55, MacLellan teaches the method according to claim 35 wherein the radiating comprises converting the forward link communication signal comprising the modulated signal from a first communication, medium type (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits)) to a second communication medium type (Figs. 1-3, second modulated Signal out of 204) comprising a wireless medium and different than the first communication medium type.

Regarding claim 56, MacLellan teaches the method according to claim 55 wherein the first communication 'Medium type comprises a wired medium (Figs. 1-3, first modulated signal within 101-103 circuits (wired circuits)).

Regarding claim 57, MacLellan teaches the method according to claim 35 wherein the communicating comprises communicating the forward link communication signal comprising the modulated signal from the housing using a wired medium (Figs. 1- 3, first modulated signal within 101-102 and communication stations 103 (wired LAN circuits); digital signal out of computer).

Claims 4-5, 14-15, 23, 30-32, 38-40 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US 5,649,296) in view of Guthrie et al. (US# 6,058,374) as applied to Claims 1, 11, 22, 27, 29 and 37 above, and further in view of Lomp et al. (5,799,010).

Regarding claims 4, 14, 23, 30, and 38, MacLellan in view of Guthrie et al. disclose the adjustment of electrical characteristics (MacLellan-Fig. 8, col. 7, lines 26-47, power adjustment associated with down link transmission-100% AM or 50% AM). But MacLellan in view of Guthrie et al. does not disclose the adjustment circuitry comprises automatic gain control circuitry.

Lomp discloses, in the art of communication power control system, the adjustment circuitry comprises automatic gain control circuitry (Figs. 29-30, col. 66, lines 44-65, AGC) for the purpose of power control of subscriber unit and base stations within communication system. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include the adjustment circuitry comprises automatic gain control circuitry in the device of Wood in view of MacLellan as evidenced by Lomp because MacLellan in view of Guthrie et al. suggests the adjustment of electrical characteristics and Lomp teaches the adjustment circuitry comprises automatic gain control circuitry for the purpose of power control of subscriber unit and base stations within communication system.

Regarding claims 5, 15, 31, and 39, Lomp continues, as disclosed in claim 14, to disclose the automatic gain control circuitry is configured to monitor the power and adjust the power (Figs. 29-30, power control system or monitoring system, col. 66, lines 44-65, AGC). Regarding claim 54, Lomp teaches the wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to adjust the electrical characteristic of the forward link communication signal comprising the modulated signal which comprises a

wired signal (Figs. 29-30, power control system or monitoring system of wired signal, col. 66, lines 44-65, AGC).

Regarding claim 54, Lomp teaches the wireless communication system according to claim 4 wherein the automatic gain control circuitry is configured to adjust the electrical characteristic of the forward link communication signal comprising the modulated signal which comprises a wired signal (Figs. 29-30, power control system or monitoring system of wired signal, col. 66, lines 44-65, AGC)

Claims 32 and 40 recite a method of operation corresponding to wireless communication systems, interrogators and methods of communicating within a wireless communication system of claims 4-5, 14 and 15. The method claimed is obvious in that it parallels the implementation of wireless communication systems, interrogators and methods of communicating within a wireless communication system indicated in claims 4-5, 14 and 15 in performing each of the functional operations of wireless communication systems, interrogators and methods of communicating within a wireless communication system. Accordingly, the inventive embodiments set forth in claims 32 and 40 are met by the references and associated arguments as set forth above and incorporated herein. Therefore, it is considered that rejection of the limitations expressed in claim 40 would have been obvious to the artisan of ordinary skill at the time of the invention for the reasons given in the rejection of claims 4-5, 14 and 15.

Claims 9-10 and 19- 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over of MacLellan et al. (US 5,649,296) in view of Guthrie et al. (US# 6,058,374) as applied to claims 1 and 11 above, and further in view of Bassirat (6,353,729).

Regarding claims 9 and 19, MacLellan in view of Guthrie et al. did not explicitly disclose the communication circuitry includes a coaxial RF cable.

In an analogous art, Bassirat teaches, in the art of network communication system, a coaxial RF cable associated with repeater station (col. 9, lines 11-18, coaxial cable associated with RF wherein the cable is used to extend the computer network via the repeater, and LAN is one of computer network architecture) for the purpose of extending the communication range.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a coaxial RF cable in the device of MacLellan in view of Guthrie et al. as evidenced by Bassirat because MacLellan suggests wired communication system and Bassirat teaches a coaxial RF cable associated with communication station for the purpose of extending the communication range.

Regarding claims 10 and 20, MacLellan in view of Guthrie et al. discloses a communication circuitry that includes a plurality of transceivers coupled to the housing (MacLellan-Fig. 1, interrogator as communication station 103) but omits teaching a plurality of wireless transceivers coupled to a common antenna (i.e., a communication station).

Bassirat teaches, in the art of network communication system, a plurality of transceivers associated with repeater station (Fig. 5, plural transceivers associated with antennas having Gar and Gaff) for the purpose of extending the communication range.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include a plurality of transceivers in the device of MacLellan in view of Guthrie et al. as evidenced by Bassirat because MacLellan suggests wired communication system and Bassirat teaches a plurality of transceivers associated with communication station for the purpose of extending the communication range.

Claims 58-59, 61-63 and 66 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al. (US 5,649,296) in view of Guthrie et al. (US# 6,058,374) in view of Wood, Jr. (US# 5,842,118) and Pidwerbetsky et al. (6,084,530).

All subject matters except generating a polling signal using circuitry of a source in claims 58 are disclosed in claims 1 and 51. However, Pidwerbetsky teaches, in the art of tag identification system, generating a polling signal using circuitry of an interrogator (col. 12, lines 12-18, polls by interrogators 103) and interrogator receiving information from application processor (col. 3, lines 32-55, source associated with application processor or pc 101) for the purpose of reducing collision of responding communications. Furthermore, one skilled in the art recognizes using circuitry of source associated with housing or pc and using circuitry of interrogator provide same interrogation process.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include generating a polling signal using circuitry of a source in the device of Wood, MacLellan, and Guthrie because Wood suggests generating a forward link communication signal and Pidwerbetsky teaches generating a polling signal using circuitry of a source for the purpose of reducing collision of responding communications. Therefore rejection of the subject matters expressed in claims 58 are met by references and associated arguments applied to rejection of claims 1 and 51 and to rejection provided in the previous paragraph

All subject matters in claim 59 are disclosed in claim 51, and therefore rejection of the subject matters expressed in claim 59 are met by references and associated arguments applied to rejection of claim 51.

Regarding claim 61, MacLellan teaches the source comprises a housing and the first communicating comprises communicating externally of the housing (Fig. 1, first communicating is between housing 101. and interrogator or base station 103).

Regarding claim 62, MacLellan teaches the method of claim 58 wherein the modulating comprises RF modulating (Fig. 1, modulated RF signal to tag 105).

Regarding claim 63, Pidwerbetsky teaches the method of claim 62 wherein the modulating comprises RF modulating (Fig. 2, modulator 202 to generate modulated RF signal to specific tag 105 via antenna 204) a carrier signal (Fig. 2, carrier signal from radio signal source

201) using a data signal (Fig. 2, information signal 200a) configured to implement polling of the transponder (col. 12, lines 12-18, polling tags 105).

Regarding claim 66, MacLellan teaches the method of claim 58 wherein the second communicating comprises communicating using the communications station (Figs. 1-3, second modulated signal out of antenna 204 or 304).

Referring to claims 60 and 67, MacLellan et al. in view of Guthrie et al., in view of Wood, Jr. and Pidwerbetsky et al. did explicitly disclose wherein the first and the second communicating comprise communicating using a wire and electromagnetic energy for communicating respective ones of the polling signals of the first and the second communication medium types. Guthrie et al. disclose RF or power line link between the master receiver (3) and remote interrogators (4a-4n) and RF communication between the transceivers (4a-4n) and plurality of tags (5a1-5xx) (see Figure 1) upon designer choice. Therefore, it would have been obvious to one ordinary skill in the art at the time of the invention to have RF or wired line communication between the master receiver (3) and remote interrogators (4a-4n) into MacLellan-Wood-Pidwebetsky system would allow the individual design choice

Claim Objections

Claim 24 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Referring to claim 24, the following is a statement of reasons for the indication of , allowable subject matter: the prior art fail to suggest limitations that a plurality of communication circuits individually configured to communicate the forward link communication signal intermediate the housing and one of the communication stations.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nam V Nguyen whose telephone number is 571-272-3061. The examiner can normally be reached on Mon-Fri, 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Zimmerman can be reached on 571- 272-3059. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300 for regular communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Nam V Nguyen/
Examiner, Art Unit 2612

/Brian A Zimmerman/
Supervisory Patent Examiner, Art Unit 2612